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ABSTRACT

Directed to local superintendents of schools and local coordinators who desire assistance in developing and implementing student information systems in their districts, this guide summarizes material presented in the Alabama State Department of Education's LEA Basic Data Systems: A Manual of Developmental Activities. It describes Alabama's educational student information systems, and outlines 15 activities in the development of such systems: (1) obtaining local education agency (LEA) commitment, (2) establishing a relationship with the LEA, (3) appointing the LEA coordinator, (4) advisory committee selection, (5) forms needs assessment, (6) identification of data needs, (7) refinement of data needs, (8) input-output forms preparation, (9) input-output dictionary preparation, (10) developing procedural materials for data collection, (11) field testing, (12) materials revision, (13) creating file systems, (14) writing operating procedures for data retrieval, and (15) formatting final orientation sessions. (FM)

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DEVELOPMENT OF BASIC DATA SYSTEMS

STUDENT INFORMATION

BY
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OFFICE OF PLANNING AND EVALUATION
DIVISION OF DEPARTMENTAL SERVICES
STATE DEPARTMENT OF EDUCATION
MONTGOMERY, ALABAMA

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State of Alabama
Department of Education
State Office Building
Montgomery, Alabama 36130

Wayne Teague
State Superintendent of Education

August 16, 1977

TO COUNTY AND CITY SUPERINTENDENTS:

During the past five years, staff members in the Office of Planning and Evaluation have made an effort to respond to a variety of requests and expressed concerns of educators throughout the state in the broad area of management of basic education data.

Many of you indicated a need and desire for additional training and on-site assistance in the area of basic data management through informal discussions and your responses to the December, 1975, Survey of SDE Services. Your comments have prompted us to make every effort to design our 1977-'78 program of services to meet the unique needs of individual local school systems. The specific services which are being offered by the Office of Planning and Evaluation for the purpose of assisting LEA staff personnel include; on-site workshops for forms design, forms management, and data control; training sessions designed to expedite the implementation of basic data management processes.

Enclosed herewith is the first of two publications which is being published by our Office of Planning and Evaluation. These publications were written specifically as tools to assist Alabama school personnel in doing a more effective job in their management of basic data.

Personnel from the Office of Planning and Evaluation are available on request to provide technical assistance, training sessions and materials, and consultant services to you and members of your staff.

Sincerely yours,

Wayne Teague

Wayne Teague
State Superintendent of Education

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Enclosure

AUG 7 1980

Preface

In 1972, through informal perception techniques, numerous individuals employed with the Alabama State Department of Education were made aware of the fact that LEA's were being burdened with an inordinate amount of paper work resulting from informational requests by federal and state agencies.

The Office of Planning and Evaluation has attempted to provide LEA's with a solution to their paperwork problem. Two years were spent in conducting a nationwide survey, a review of the literature pertaining to informational systems, and applying for a federal grant that would provide the financial assistance necessary for such an undertaking.

The past three years have been spent in developing a model Student Information System (SIS). A cooperative working arrangement was contracted between the Office of Planning and Evaluation and the Auburn City School System. After two years of arduous work, interaction with all staff members of the pilot school system, continuous evaluation of all activities and products, we have prepared this publication as a guide for those school systems contemplating the development of their own student information system.

We hope that the activities, which are described in this publication, will be helpful to you in your endeavors to complete the task that you have undertaken.

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INTRODUCTION

An important development in education today is the building of formalized information systems. Demands for needs assessments and precise statements of objectives in program development -- to mention just two critical needs that place demands on school systems -- have radically changed the perspective of the types of information needed in the elementary-secondary school decision-making processes. Additionally, the national trend toward increased accountability in education has placed an increased burden on school systems' information delivery. Currently, and seemingly for the immediate future, more specific information will be requested from LEA's by state and federal agencies.

It seems reasonable to conclude that almost every school system in this country has some type of information system that has evolved out of its special needs. Smaller school systems seldom have a formalized information system. Often these information systems are functional for local needs and provide data on a limited basis for necessary district operations on a day-to-day routine operating level. Such systems are usually unstructured and non-user oriented. These systems do not begin to meet the needs of personnel at the middle or top "strategic" planning levels. When the request burden increases such systems usually become dysfunctional because the information required to meet the various needs exceeds the capacity of the system to deliver.

Even school systems that have automated information systems often do not coordinate their own efforts with state and federal collection efforts. Negligence of this nature has led to numerous duplications of requested information.

The extent to which data currently being gathered are utilized in program planning is open to question. As pressures mount for increased accountability, and for more effective and efficient performance, decision-makers at all levels of education need data -- data that are more accurate, more timely, and more tailored to their particular job requirements.

The failure to develop an adequate information system, or to properly utilize available data, has become widely recognized as a problem requiring special attention. It is to this purpose that this publication has been developed.

Review of the Literature

Results of a review of the literature were unproductive. The standard journals, periodicals, and texts discussed student information systems in very limited terms. A complete void was encountered when articles and documents were examined for a description of the developmental or operational activities required for a total student information system.

When the initial review of the literature failed to produce the information being sought, a computer-based information retrieval procedure was utilized. This procedure made it possible to review half a million references. The search was authorized through the RISE center in Pennsylvania. The results of the computerized search were as unproductive as the literature review. The examined data bases did not reveal any formally documented student information systems. While there were many segments of student information systems in use in large systems; they were not "complete" student information systems.

Why a Student Information System

Why do we need student information? That is easy to answer -- we need such data to serve the individual student's learning needs. Why the learner's needs? Because the learner is the focus of all activity in educational programs. These programs, however, must be well-planned if the facilities, human resources, and appropriately planned learning activities are to reach the maximum number of our youth.

Well-planned programs require extensive knowledge about individual students, groups of students, teachers, facilities, financial resources, and curricula. The student information must be based on reliable data that has been properly collected, processed, evaluated, and disseminated on a timely basis.

Part of this planning to meet the educational needs of individual students requires meeting informational requirements set by state and federal agencies; which allocate moneys to school systems, or perform a "watchdog" function.

Alabama's Educational Student Information Systems

Before we describe the status of student informational systems in Alabama let us first look at unstructured versus structured systems. Information systems' status becomes more meaningful when one understands the differences between unstructured and structured systems.

Unstructured: An unstructured system is one for which there is no overriding plan that states the procedures to be utilized in data collection, storage, and retrieval. In such a system data is spread throughout the system, often on many different forms; and with nobody knowing exactly who, what, where, or why. Because data are collected for many reasons and are reported on forms which too often are stored away, such systems require inordinate amounts of time for maintenance purposes. By the time data are available they are often out-of-date; if, in fact, they can even be located. The problem of data retrieval in unstructured systems is that the data are collected in such a way that they only fit into the context provided on a given form and cannot be used in relationships outside of that context.

Structured: In a structured system there is an overriding plan for which and by which the data are collected, arranged, stored and retrieved. Such systems usually consist of three subsystems:

> An input subsystem, which has the task of collecting data from the field, translating it accurately into some form suitable for storage and manipulation, and transferring it to the data management subsystem.
>
> A data management subsystem has the task of storing data, retrieving data efficiently upon request, manipulating the data as required, and translating the data to the output subsystem.
>
> An output subsystem has the task of delivering the information in the prescribed format to the user of the information requested.

Structured systems, unlike unstructured systems, are highly user-oriented. It gives the individual the information requested in the configuration that was requested. In a user-oriented system data are stored in such a way that the user specifies the output design desired and the system complies to the user's instructions. A structured system has this capability because data are stored in such a way that they can

be flexibly retrieved. A user-oriented system's flexibility is directly related to the system's initial classification scheme.

The classification scheme is usually called a taxonomy. The general purpose of a taxonomy is to build the proper framework for the design of an integrated data base. Some of the more specific purposes of a taxonomy are to: provide a means of systematically enumerating the data needs in a manner which proves useful; provide a systematic technique for identifying duplicate datum elements being collected and stored; provide a random access method by which datum elements (input) and information items (output) can be identified, indexed, stored, and retrieved without regard to specific information or data applications; provide the basic logic, which relates appropriate datum elements to specific information items so that the users can obtain any given information by the random access method; provide an operational subsystem by which specific information requested can be classified, indexed, and stored in such a way that the system can answer questions asked of it.

The basis of the flexibility described in the preceding paragraph is the method of classifying the descriptors for an informational item (bit), and systematically converting the descriptor words to a sequence of numeric segments which serve as the basis for the accessing process. Any word, or words, describing an information item can be referenced to a numeric identity which can be accessed randomly in a sequential listing of all items previously classified. This technique permits consistent classification and random retrieval of data from the integrated data base because each datum item is coded and stored by its unique numeric and word descriptor. This means that an infinite number of applications can be made for each item stored in the system - a universal coding structure. Such a technique eliminates duplicate requests for the same data.

Do you have a structured or an unstructured student information system?

The Office of Planning and Evaluation conducted a statewide survey (1973) in an attempt to identify the status of school systems' student information systems. Results of the survey indicated that 19 Alabama School Systems (22) percent) at that time were utilizing automated data processing. Only 8 school systems owned their data processing equipment, while 11 school systems were renting the equipment. Most of the 19 school systems were utilizing automated data processing for accounting purposes, budgeting, and payroll. Some of them were also doing attendance reporting, grade reporting, and scheduling of students. None of the 19 school systems had a "complete" student information system.

The remaining 108 school systems indicated that their maintenance of a student information system consisted mainly of the student's cumulative record folder and information inserted in the folder. Aggregated student information was housed at various locations within their respective systems according to the general nature of the information. Almost all of

these systems did not keep duplicate records, but had student records housed in facilities that would protect the records from hazardous conditions. Principals, guidance counselors, teachers, and secretaries -- in rank order -- were identified as those individuals being responsible for initiating and maintaining student records. The average time spent on the maintenance of student records was 63 days per year -- 86.4 days in city districts and 42 days in county systems.

Needless to say, the survey indicated that school systems in Alabama did not epitomize effective and efficient methods of developing and maintaining student records. Do not be offended by the preceding statement! Approximately 93 percent of the LEA's in this country have student populations of under 6,000 pupils. Only a small percentage of all school systems have automated data processing -- automated data processing in school systems is not common. Yes, most of the larger school systems do have automated data processing, and even some of the smaller school systems utilize an intermediate administrative level -- such as a Board of Cooperative Educational Services (BOCES) -- to defray the cost over a number of school systems. Even these systems have limited programs when processing student information. The vast majority of school systems surveyed did not have a structured student information system -- did not have a student information system period.

What Is a Student Information System

First of all, it is a system that provides the user the capability of managing the student data being collected. The data base of a student information system should contain all datum bits that are essential to informed decision-making. A student information system should include those data that are necessary for three types of decisions:

1. Operational day-to-day decisions in which the task is to keep the organization, or parts of it, on some predetermined pathway. The orientation here tends to be more short-range, and the consequences of the decision more immediate.

2. Middle level decisions in which the task is to determine how the organization should be structured internally to meet its stated goals, to monitor its operation, and to take actions to assure that the structure is implemented and maintained. The orientation here tends to be somewhat longer-ranged, and the exception principle becomes important.

3. Top (or "strategic planning") decisions in which the task is to set goals, define policy, and, in general, determine how the organization is to relate to its environment. The orientation here is long-range, the

consequences are delayed, and some ability to predict conditions at future dates is required.

The primary thrust of any student information system is to provide teachers with accurate data on students in a timely manner. The data being provided teachers should enable them to better understand the individual student and, therefore, provide a more realistic educational program for the individual student. The secondary thrust of such a system is to provide members of the administrative staff the necessary information with which to make informed decisions concerning individual students, groups of students, instructional programs, facilities, etc. Ancillary to this thrust, it provides administrators with needed data for reporting purposes.

Never to be excluded are those informational bits that are vital for reporting, whether it be for in-house, state, or federal reporting purposes.

One fact you should never lose sight of is that most of the information you collect on individual students, as a rule of thumb, can be aggregated at succeeding organizational levels.

Generally speaking, a complete student information system should collect data on: a student's academic achievement; attendance; demographic information pertaining to the student and whomever the individual resides with; health; skill development, especially measurements of math and language arts; food services; transportation; instructional; testing; involvement with supportive services; discipline; and guidance information. The specific datum collected under each category will vary according to each school systems' needs. The informational needs of each school system should be identified by the users in that school system.

Recommended Developmental Activities

The developmental activities recommended and explained in the following pages represent a systematic approach to the development of your own student information system. All school systems do not have to become involved in each and every activity that is presented. Most of you should follow, at least in sequence, the activities as they are described.

Remember, your situation and your needs, as identified by your staff, probably will differ to varying degrees from other school systems.

Activity #1: LEA Commitment

During the process of determining if your school system should develop a student information system there are a number of basic steps that should be taken. You, as the superintendent of a school system, must be convinced that the benefits that could be derived from a

student information system will more than compensate for the amount of time and effort taken to develop such a system. If you question your own commitment, stop now and evaluate your own position. When you have sufficiently examined the intervening variables and they provide the justification for the development of a student information system, you should proceed with the process of gaining the commitment of people in your school system.

You would be well advised to select a small group of staff members that could assist you in presenting your developmental needs to your school board. Included in this group should be the most vocal opponent of any departure from customarily monolithic school procedures. Having selected key staff members it is now the responsibility of the superintendent to educate the group to the necessity for, and benefits derived from the development of a student information system. Some school systems might profit from the services of an outside consultant at this point in time. Again, this is another stopping point in the process. If you are unable to convince your key personnel as to the desirability of such a system, you must undergo another examination of your position.

Assuming that the selected group is in accord with your own position, the next step is to present a formal request to your board of education. The presentation must consist of a complete appraisal of the system's: existing informational base, existing informational burdens, existing management of student information, increased student informational base, increased management capabilities, and the lessening of informational burdens. The school board can make an informed decision only if they have been briefed and understand the facts.

If there is one thing that acts as a deterrent to teacher-administration job satisfaction, it is certainly a school board's reversals of decisions -- especially when the professional staff have been led to believe that the board is committed to the involved task. It is absolutely essential to the development of a student information system that there is a letter of formal commitment, and that the commitment letter includes a statement pertaining to "sufficient length of time to properly adjust and evaluate."

Activity #2: Establishing Relationships Within An LEA

In the process of selecting the membership of your key personnel team you actually initiated the establishment of a positive relationship with your staff -- a relationship which is vital not only to the success of the development of a student information system; but for

any significant deviation from existing procedures as well. A systemwide meeting, or building-level meetings, should be conducted to present to all staff members the identical information afforded the board of education. Building-level meetings are preferable because they are more conducive to interaction between staff members and presenters. Confirm the board's commitment to the project. This should be not only for the developmental processes, but also to give ample time for its utilization and evaluation. Eliminate the fear of it being one of those "here today and gone tomorrow" changes. Answer as many questions as possible during the initial orientations -- this leaves staff members with a positive perception of your understanding and commitment to the project. If there are a significant number of unanswered questions then reschedule a meeting with that group or groups -- try to provide an answer to all questions!

During these orientation sessions you should make known the fact that a present staff member will be selected to coordinate all of the developmental activities. Inform the staff that an Advisory Committee will be created. Bulletins that describe the qualifications for, and responsibilities of these positions will be forthcoming soon. Enlist all staff members' recommendations as to whom they would like in these positions.

Activity #3: Appointing the LEA Coordinator

The individual appointed to this position is crucial to the success of the student information system. It must be a person that the majority of the staff: holds in high esteem, feels is knowledgeable about student information, feels has expertise in research and evaluation, and a person that can make decisions.

A job description, or notification of vacancy, should be sent to every building; and this should be discussed at their next staff meeting. This publication should be posted on the staff's bulletin board. If necessary, building administrators should call a special staff meeting -- the sooner all staff members are involved in the developmental process the more likely you are to succeed. It is very important that your local coordinator comes "on board" as quickly as possible. Remember, as the job title implies, this person will coordinate the remaining activities. To a great degree, the success or failure of project depends upon this person.

Building administrators should solicit the names of individuals that their staff perceives as being qualified. Lists of "qualified" persons should then be submitted to the

superintendent. These lists should be compared with the applications submitted by interested staff members. Again, you must be cautious in your final selection of the coordinator. That individual's working relationship with your staff will, in all probability, determine the success or failure of the project.

Once this person has been employed, you are ready to develop the organizational structure. This will temporarily reduce the superintendent's involvement, other than as an inputer of information, until those activities pertaining to input-output forms are conducted.

Activity #4: Advisory Committee Selection

Equal representation on this committee is essential -- do not overload it with administrators. Remember, your staff as a whole is assisting in the developmental efforts, so give equal representation to all facets of your program

Whether you elect to use grade-level representatives, building representatives, or organizational-level representatives is dependent upon the size of your school system. All subsequent meetings should be directly related to your selection of representation on the Advisory Committee. It is suggested that you seriously consider a combination of grade-level and organization-level representation. Experience has taught us that more meaningful input into the developmental processes comes about through this combination of representation.

The superintendent and the coordinator should develop a description of the Advisory Committee's functions and responsibilities. This description should be sent to each building administrator for posting on the teacher's bulletin board. A letter from the superintendent should be sent to each staff member -- professional and non-professional -- requesting a reply if they would be interested in being considered for membership on the Advisory Committee. Each staff member indicating an interest should be interviewed by the coordinator. Do not overlook the list of recommended individuals to serve as coordinator. The coordinator should contact those individuals even if they did not indicate an interest in being on the Advisory Committee -- they were previously recommended for a more difficult position. The coordinator should also obtain membership recommendations from all building administrators and the superintendent.

The Advisory Committee should reflect equal representation; so remember, that administrators, secretaries, supportive personnel, and lay persons have to be screened and interviewed. It would not be unwise to purposely include a lay person who is an antagonist of the school system.

If you elect to determine representation on the Advisory Committee vis-a-vis grade-level representatives; let those individuals select the individual who they feel will best represent their combined thinking.

Prior to the final selection of representatives and/or members of the Advisory Committee, the coordinator should develop a schematic chart depicting the composition of the Advisory Committee. The coordinator also needs written assurance from the superintendent that released time will be provided for the members of the Advisory Committee.

Activity #5: Needs Assessment

Usually one thinks of a needs assessment as the identification of what conditions actually exist and how these conditions compare with those that are reflected in goal statements -- desired conditions. Here we are looking at: What information do we now collect for local purposes, state purposes, and federal purposes; where is the information collected being stored; when do we use the information; and why do we collect the information? If school systems conducted just Activity 5 their efforts would be worthwhile. You probably will be astounded by the feedback you gather from this activity.

The coordinator simply requests from each employee of the school system a copy of all forms on which that individual enters any information. These forms should then be categorized as local, state, or federal. These can be subcategorized into organizational levels, building-levels, or grade-levels if need be. When all subcategorizations have been performed you are ready for the next step -- a listing of all forms, by organizational levels, to be distributed to all employees.

Using small groups as the basic method of interacting with the entire staff, have all employees identify their knowledge of each specific form. The questions asked pertaining to each form should be designed to provide you with information about the following: the source of the form; who requested that you provide data to be entered on the form; what was the date that you received the form; what was the date of submittal; and to the best of your knowledge, in rank order, to whom did the form go after leaving your position. This activity not only provides you with a wealth of information concerning forms utilization, but it identifies existing forms flow patterns and insights for future flow patterns and filing systems.

Activity #6: Identification of Data Needs

This activity is designed to: identify student information datum presently being collected; identify student information

data that is not presently available to staff members, but is needed by them; identify the priority of need placed on each student information datum by all staff members; provide a listing, in rank order, of all the student information data needed by the school system.

Extract each bit of student information datum from forms currently used within the school system. Request each employee to submit a list of student information which they need, but that is not presently available to or provided them. Correlate these two collections and construct a single, alphabetical listing of all student information data needed by the school system. Distribute this list to all employees and have them assign a priority ranking of from 1 to 5 on each datum item, and then tabulate the responses. The tabulation of responses should be compiled by the following suggested groupings: administrators housed in the central offices; building principals, by organizational levels; coordinators or departmental heads; supportive personnel, by their areas of specialization; teachers, by grade levels; secretaries, by organizational levels; and all other staff members by their category of work. Tabulate all responses, and list all datum in rank order -- a systemwide rank ordering and a category rank ordering. Following the same suggested procedures of distribution and small group meetings, review the rank orderings of each datum item, and make note of any recommended changes of the rank order.

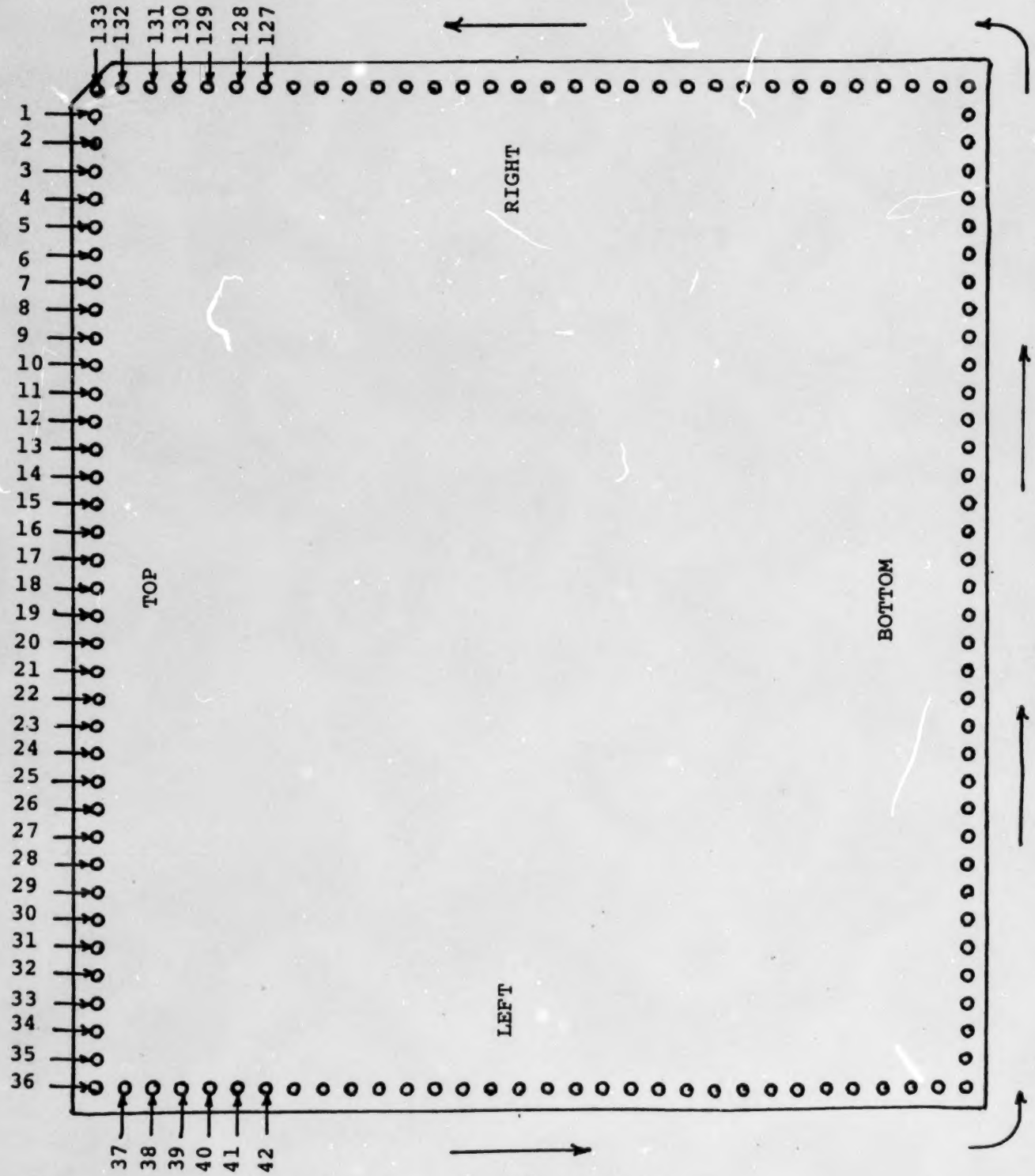
The products of Activities 5 and 6 provide you with the basic information needed to design your student information system: the student information data you need to be collecting; the users of this information; locations of filing systems; the necessary forms needed to manage the data; and the forms' flow patterns.

Activity #7: Refinement of Data Needs

This is one of the crucial points of involvement concerning the Advisory Committee. In the two preceeding activities you should have been utilizing your representatives to confirm meetings, collect responses, and provide you with "feedback." It is during this activity that the representatives/ Advisory Committee are critically engaged in the decision-making process. All the findings of Activities 5 and 6 are presented by the coordinator to the full committee, item by item. The committee makes the decision as to what "is and is not needed" for the student information system. The items that are selected to be retained must then be placed in a format depicting the following: the datum item itself; who is the user of this datum; the form it is found on, if known; the source of input for the datum; dates indicating input-output deadlines; and a general statement of its use. Some type of designated color coding should be utilized in identifying

Figure 1

HOLE NUMERATION



13

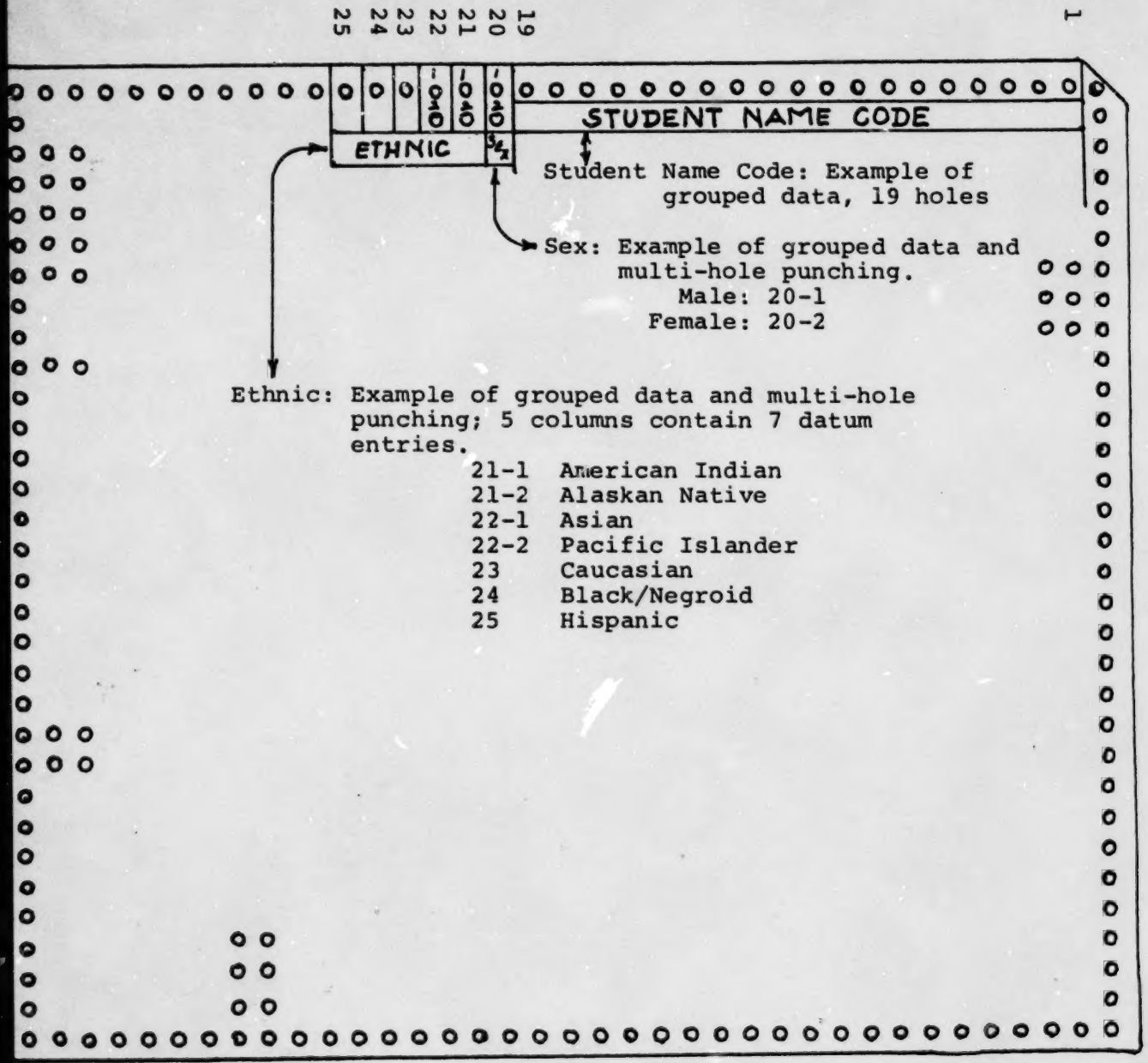
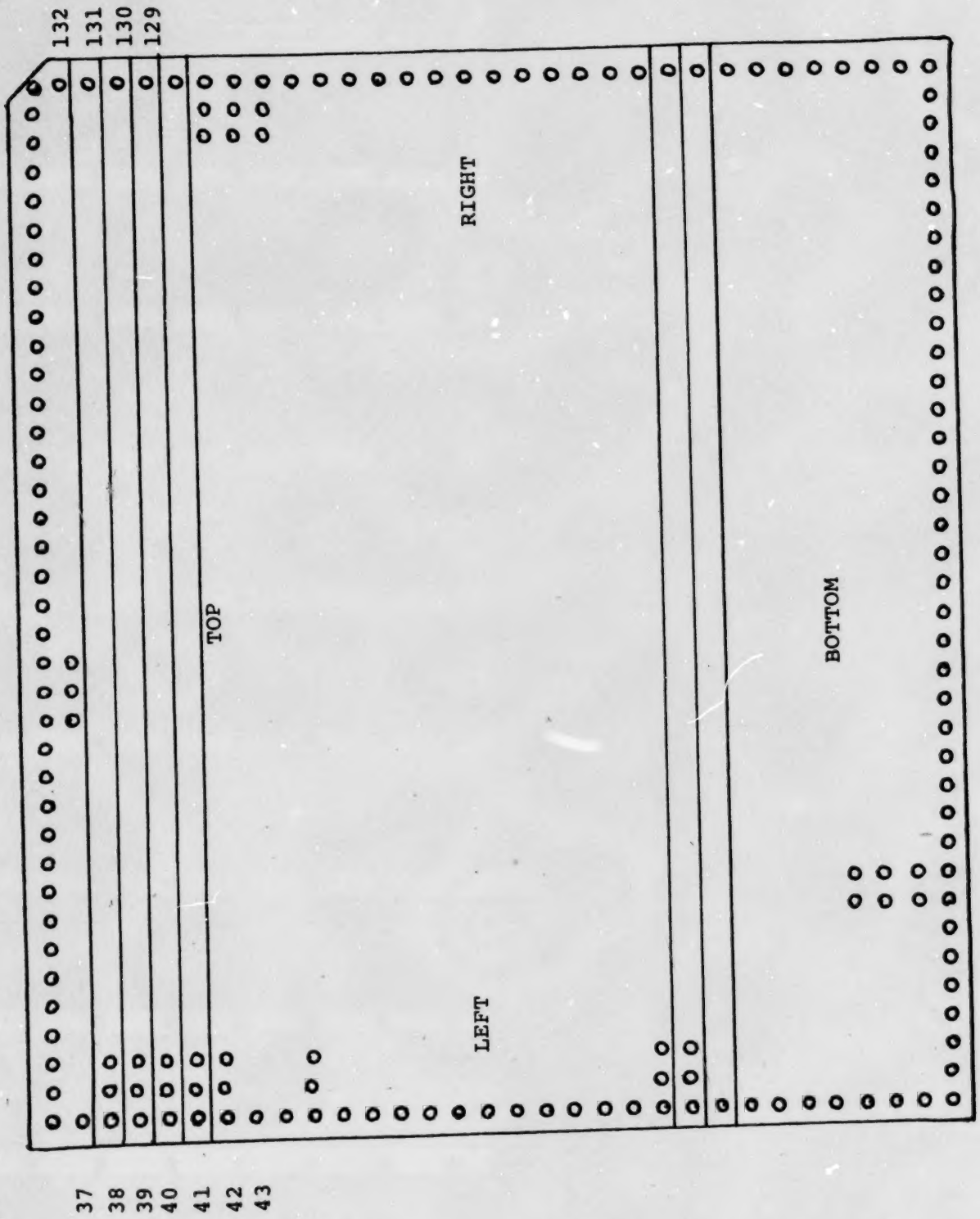


Figure 2

MULTI-HOLE NUMERATION
AND
GROUPED DATA

Figure 3

LINE LOCATIONS



those items that definitely need revising, could be revised, and those not requiring any revision. Once this activity has been completed you have the necessary data to develop your tentative input-output forms, and their necessary accompaning documents.

Activity #8: Prepare Input-Output Forms

In a manually operated system, as developed in the model system, the input forms and output forms can be designed in such a way that they serve in both capacities simultaneously.

The first phase of this activity should be spent in categorizing the datum items identified in Activity 7; usually these items fall into categories such as demographic, achievement, health, attendance, etc. Once you have determined the amount of information in each category, you must design the general plan of organization or arrangement -- the format. Thirdly, a decision must be made as to what information is best suited for hole-punch sorting, and what information is more suitable to written comments on the interior face of the card. In some instances you might have to experiment with various pieces of data to see which datum lends itself more readily to retrieval, using different formats. Construct the mark-up for each card, and have the selected printing company send you your proofs as soon as possible. It is emphatically suggested that you procure the services of a reputable forms printing company rather than attempt the hole-punching and printing yourself.

Upon receipt of the proofs check each datum item for placement on the card, and its spelling. A point of emphasis -- make sure you have provided yourself with a sorting scheme that will enable you to cross-reference one card with another.

Starting in the upper right-hand corner and moving toward the left, number each hole on the outer edge of the card in consecutive order (see figure 1). Every item you have identified for hole-sorting is assigned a hole number. In most instances similar data can be grouped together and these groupings should be identified in the dictionary by the inclusive hole numbers as well. American Indian, Alaskan Native, Asian, Pacific Islander, Caucasion, Black/Negroid and Hispanic are single ethnic categories. They can be identified under one combined group descriptor (see figure 2). As you can see; each has its own hole for punching purposes, and the combination together forms the ethnic grouping. Those items to be entered on the interior face of the card are assigned a line location. (see figure 3).

A thorough understanding of the concept of a manually operated card system, its flexibility, and a well-developed usage of sorting techniques, should be provided each member of the

Advisory Committee or representatives. This is essential because these individuals eventually become "teachers" of others in your school system. Having a trained individual in close proximity to where problems could occur is a preventive measure. The anxiety level can be maintained at its minimal level when your staff members know that the majority of their questions can be answered by a person within their own building. ALL administrators should develop a sophisticated level of understanding concerning the cards -- something less than a high degree of expertise in sorting procedures would be fatal to the success of the informational system.

Make copies of the proofs and send the originals to the printer. Printing usually takes from 4 to 6 weeks. While the materials are being printed there are other activities that can be conducted concurrently.

Activity #9: Input-Output Dictionaries

This activity is the key to the accessibility of the data you intend to collect. The dictionaries provide a card by card, hole by hole, line by line, description of each datum collected.

Again; every item is assigned either a hole number or a line location, and similar items are grouped together for identification purposes (see figures 2-3). A description of each datum item is written for each hole, groups of holes, and line of location. In writing the descriptions use HEW's Handbook V, Revised, "Student/Pupil Accounting."

Activity #10: Procedural Materials

You have completed the formating of the cards and the development of the dictionaries which describe the what's and where's of information, so the preparation of procedural materials for inputting data is the next logical activity. Procedural materials should be approved by the Advisory Committee.

Step-by-step procedures pertaining to the entering of data on each card have to be developed. The procedural statements must identify where, when, and how, holes are to be punched and line-location data is to be recorded. Do not expect staff members to use logical deduction -- leave nothing to chance.

Activity #11: Field Testing

At this point in time the most informed people, concerning the development of the student information system, are the members of the Advisory Committee. They are the most logical starting point for field testing the materials that have been developed thus far. Have them check every item in the dictionaries against the finished product (cards). Secondly, have them walk through the procedural steps for each card. Have them actually punch the information on the cards, and then have them sort out requested student data. This in-basket technique not only familarizes them with the flexibility of the cards for gathering data, but also develops their ability to perform key-sorting. If possible, develop their key-sorting skills to a significant level of expertise. Remember, these people will be your key assistants during the orientation-instruction of other staff personnel.

Make note of all the recommendations that the Advisory Committee makes. If these recommendations concern the dictionaries and/or the procedural statements, make the changes prior to distributing the materials to other members of the staff. Hold those recommendations concerning the cards themselves until you obtain feedback from all school system employees.

Conduct orientation sessions, using small groups, for one card at a time. Do not attempt to implement all the cards at the same time. The overwhelming amount of student data being gathered could easily alienate your staff. Let your staff become at ease with one card before you implement another. Gather all the feedback you can -- and let those that you are working with know what others are saying, or have said. Carry their "involvement" as far as possible. As you complete the field testing on one card and begin the orientation to another, report your findings on the completed card to the Advisory Committee.

Activity #12: Materials Revision

The coordinator and the Advisory Committee must now evaluate all the recommendations made by the entire staff. This group should consider first those recommendations that pertain to the cards themselves. Secondly, dictionaries should be corrected to reflect any datum item change on the card. Last, re-write those procedural materials that require changes to be made.

Send the revamped card(s) to the printer with your purchase voucher. The dictionaries and procedural materials can be printed locally.

This activity is an on-going process. Whenever you encounter a "needed" change, make note of it; and at predetermined time intervals, have these changes reflected in your materials.

Activity #13: File System

Early in the developmental process you were provided with some data which should have given you some insights into where, when, why, and how you should design your file system. The nature of the data being collected and recorded on the different cards clearly indicates their most advantageous placement. Your local situation will determine whether or not you should house the materials alphabetically by teacher, by grade, by building, etc. Prime consideration should be given to the "user" of the data recorded on the card. We have found that the proximity of the card's location to the user is directly related to its use.

Activity #14: Operating Procedures

Write step-by-step procedures to be followed by all staff personnel, regardless of position, when requesting data from the system. Identify those individuals who should be initially contacted, who those individuals go to, what lead time should be given, what forms to be used for what requests, who receives what, etc.

This activity, as Activities 12 and 13, should be subject to continuous evaluation - revision processes. An over-request burden in any office, inappropriate forms, inordinate amount of time involved in turn-around documents, are examples of inefficient procedures. Provide for change.

Activity #15: Final Orientation

Present each of the cards that you have developed as part of the student information system to the entire staff. Along with the card presentations, you should briefly describe the following: procedures for each card; dictionaries; the file system, with special emphasis on the location of each card; and the cross-reference system; all districtwide policies that pertain to the student information system; and the manual -- if one has been written.

Be sure to acknowledge key personnel involved in the development of the system: coordinator, Advisory Committee, representatives, and other deserving individuals.

Remind all staff members that: The System is continuously being updated, that revisions will be implemented at the first grade level, and orientation sessions will be conducted for all changes.

Make the same presentation to the board of education. Suggest to the board future dates for reporting the progress - evaluation of the system.

Publication Review

This publication was developed primarily for local school superintendents and local coordinators. It briefly describes those activities that must be conducted if a local school system desires to develop their own student information system. Because each activity is only briefly described, this publication may leave you with numerous unanswered questions. A manual has been developed that provides the recommended, sequential, step-by-step procedures to be followed under each of the activities heretofore described in this publication. This manual is available upon request from the Office of Planning and Evaluation, Alabama State Department of Education.